



# Recommendations to Improve Pedestrian & Bicycle Safety for the Community of Palermo

September 2017



**Berkeley SafeTREC**  
SAFE TRANSPORTATION RESEARCH AND EDUCATION CENTER

# Recommendations to Improve Pedestrian & Bicycle Safety for the Community of Palermo

By Wendy Ortiz, Jaime Fearer, Austin Hall, California Walks;  
Jill Cooper, Katherine Chen, UC Berkeley Safe Transportation Research & Education Center (SafeTREC)

## Introduction

At the invitation of the Butte County Public Health Department, the University of California at Berkeley's Safe Transportation Research and Education Center (SafeTREC) and California Walks (Cal Walks) facilitated a community-driven pedestrian and bicycle safety action-planning workshop in the unincorporated community of Palermo to improve pedestrian safety, bicycle safety, walkability, and bikeability across the town.

Prior to the workshop, Cal Walks staff conducted an in-person site visit on Wednesday, May 24, 2017, to adapt the Community Pedestrian and Bicycle Safety Training program curriculum to meet the local communities' needs and to provide context-sensitive example strategies for the community's existing conditions. Cal Walks facilitated the workshop on June 28, 2017, which consisted of: 1) an overview of multidisciplinary approaches to improve pedestrian and bicycle safety; 2) walkability and bikeability assessments along three key routes; and 3) small group action-planning discussions to facilitate the development of community-prioritized recommendations to inform Palermo's active transportation efforts. This report summarizes the workshop proceedings, as well as ideas identified during the process and recommendations for pedestrian and bicycle safety projects, policies, and programs.

## Background

### Community Pedestrian and Bicycle Safety Training Program

The Community Pedestrian and Bicycle Safety Training (CPBST) program is a joint project of UC Berkeley SafeTREC and Cal Walks. Funding for this program is provided by a grant from the California Office of Traffic Safety (OTS) through the National Highway Traffic Safety Administration (NHTSA). The purpose of the CPBST program is to train local neighborhood residents and safety advocates on how to improve pedestrian and bicycle safety and to strengthen their collaboration with local officials and agency staff to make communities safer and more pleasant to walk and bike. For each training, the program convenes a multi-sector, multi-disciplinary local planning committee to tailor and refine the training's curriculum and focus to meet the community's needs. Additionally, Cal Walks staff conduct pre-training site visits to collect on-the-ground observations of existing walking and biking conditions to inform the training's scope and focus.

The half-day training is designed to provide participants with both pedestrian and bicycle safety best practices and a range of proven strategies (the 6 E's: Empowerment & Equity, Evaluation, Engineering,

Enforcement, Education, and Encouragement) to address and improve pedestrian and bicycle safety conditions and concerns. Participants are then guided on a walkability and bikeability assessment of nearby streets before setting pedestrian and bicycle safety priorities and actionable next steps for their community.

For a summary of outcomes from past CPBST workshops, please visit: [www.californiawalks.org/projects/cpbst](http://www.californiawalks.org/projects/cpbst) and <https://safetrec.berkeley.edu/programs/cpbst>

## Selected Pedestrian & Bicycle Safety Conditions in Palermo

### High Speeds and Narrow Streets

As an older rural community, all of Palermo’s roads are two lane roadways, with irrigation ditches and private property serving as boundaries on either side with little to no roadway shoulder. Palermo Road and Lincoln Boulevard, in particular, are the most traveled roadways, with Palermo Road connecting to CA-70 and Lincoln Boulevard and Upper Palermo Road connecting to the town of Oroville in the north. The posted speed limit along Palermo Road is 35 miles per hour (MPH) and 25 MPH in the school zone. The posted speed limit on Lincoln Boulevard is 40 mph, yet drivers appear to travel at much higher speeds. With the exception of a short stretch of Palermo Road adjacent to the school that has a walk and bike path, all of these roads lack pedestrian and bicycle facilities. Students from Palermo Middle School as well as outlying elementary, middle, and high schools regularly use these roadways to get to school or their bus stop on foot or by bicycle.



Two-lane roadway in Palermo where drivers are often noted travelling faster than the posted speed limit.

## Drainage and Flooding

Most areas through town where the installation of shoulders or sidewalks might be suitable must contend with open drainage ditches and canals. These canals were, at the time of our workshop, filled with vegetation and had overflowed during heaving rains of the 2016-2017 winter—flooding roadways and businesses in the lower parts of Palermo Road and affecting transportation throughout the community.



Open drainage canal in an unpaved shoulder in Palermo.

## Lack of Pedestrian Infrastructure

There is a substantial lack of pedestrian infrastructure throughout Palermo, with the majority of the community lacking sidewalks. Marked crosswalks are present only at the intersection of Lincoln Boulevard and Palermo Road, as well as seven marked crosswalks spread around Palermo Middle School. The lack of pedestrian and bicycle facilities is compounded by the narrow roads and high speeds experienced on the major roadways like Lincoln Boulevard and Palermo Road. Pedestrian-scale lighting was also missing throughout Palermo, which may contribute to unsafe walking conditions at night.



Students walking after school along an unpaved shoulder near Palermo Middle School.

## Code Enforcement & Maintenance Issues

There is overgrown vegetation throughout the community. In many cases, the vegetation extends onto the roadway and onto medians, forcing pedestrians to travel in the roadway on busy roads such as Lincoln Boulevard. Additionally, there were several parcels of private property throughout the community that featured risks to pedestrians and bicyclists, including dead and dying trees at risk of falling on the roadway, overgrown properties that pose fire risks, and abandoned machinery along shoulders. Motorists parking on the walking and biking path along Palermo Road has discouraged the use of and limited access to the Palermo Road bicycle/pedestrian path. Palermo residents also experience issues with stray, aggressive dogs that intimidate and chase pedestrians and bicyclists.

## Pedestrian & Bicycle Collision History

Between 2011-2015,<sup>1</sup> there were 5 pedestrian collisions, including 3 severe injuries, and 2 complaint-of-pain collisions and 1 bicycle collision where there was a visible injury. Based on our analysis of the collision data, collisions are concentrated along Palermo Road and Baldwin Avenue. While collisions seem low, rural areas in California, as a whole, have higher rates of injury collisions. In an effort to address injury collisions throughout the state, this project reaches out to rural areas.

In Palermo, 60% of pedestrian collisions can be attributed to driver violation, while 40% of pedestrian collisions can be attributed to pedestrian violation. Driver violations largely included failure to yield to pedestrian right-of-way in a crosswalk<sup>2</sup> and unsafe speeds, while pedestrian violations were primarily failure of the pedestrian to yield to vehicle upon roadway outside of a crosswalk.<sup>3</sup> For bicycle collisions, 100% are attributed to improper turning, either by a bicyclist or a driver.<sup>4</sup>

A full discussion of the pedestrian and bicyclist collision data prepared by UC Berkeley SafeTREC can be found Appendix A.

## June 28, 2017 Workshop

The Butte County Public Health Department requested a workshop to 1) provide County agency staff, community organizations, and residents with a toolkit for promoting pedestrian and bicycle safety to inform future active transportation projects; 2) strengthen working relationships between the Butte County Public Health Department and other stakeholders to ensure the best outcomes for the residents of Palermo; and 3) develop consensus regarding pedestrian and bicycle safety priority and actionable next steps.

---

<sup>1</sup> Please note 2014 and 2015 data is provisional.

<sup>2</sup> Pedestrian Right-of-Way Violations are defined as instances where a driver fails to yield to a pedestrian in a marked or unmarked crosswalk when the pedestrian has the right of way (e.g., when the pedestrian has a "Walk" signal at a signalized intersection).

<sup>3</sup> Pedestrians have the right-of-way in marked and unmarked crossings, and drivers are legally required to yield to pedestrians in these instances. However, when pedestrians cross outside of marked or unmarked crossings, pedestrians must yield the right-of-way to drivers. This is not the same as the term "jaywalking," which refers to crossing outside of a marked or unmarked crossing between two signalized intersections. A pedestrian is legally able to cross outside of a marked or unmarked crossing between two intersections where one or none of the intersections is signalized but only if the pedestrian yields the right-of-way to oncoming drivers.

<sup>4</sup> The California Vehicle Code 21200(a) specifies that a person riding a bicycle "has all the rights and is subject to all the provisions applicable to the driver of a vehicle..." Accordingly, some primary collision factors are ambiguous as to whether the driver or bicyclist committed the violation without examining individual traffic incident reports.



Participants learning the 6 E's approach to pedestrian and bicycle safety.

The workshop was hosted from 9:00 am to 1:30 pm at the Palermo Middle School Cafeteria. Lunch was provided to help maximize resident participation. Eighteen (18) individuals attended the workshop, including representatives from City of Oroville Planning Division, Palermo Unified School District, Butte County Office of Education, Butte County Public Works, Butte County Sheriff's Office, California Highway Patrol, University of California Cooperative Extension CalFresh, Palermo Community Council, and other residents.

## Reflections from Walkability & Bikeability Assessment

Workshop participants conducted walkability and bikeability assessments along three routes:

- Route 1 traveled east on Palermo Road, south on Upper Palermo Road, west on Williams Avenue, and north on Melvina Avenue back to Palermo Middle School. This route focused on the conditions of the current pedestrian and bike path on Palermo Road and Palermo Park on Williams Avenue, between Melvina Avenue and Irwin Avenue.
- Route 2 traveled west on Palermo Road, north on Lincoln Boulevard, east on Baldwin Avenue, and south on Hewitt Avenue back to Palermo Middle School. The second route looked closely at conditions along Baldwin Avenue, which is a major pickup and drop off zone for students taking the school bus or walking home.
- Route 3 travelled north and south on Autrey Lane, between Monte Vista Avenue and Las Plumas Avenue, with a specific purpose of gathering data for Butte County Public Works to apply for Caltrans' Active Transportation Program Cycle 4 in 2018.

Participants were asked to 1) observe infrastructure conditions and the behavior of all road users; 2) apply strategies learned from the 6 E's presentation that could help overcome infrastructure concerns and unsafe driver, pedestrian, and bicyclist behavior; and 3) identify positive community assets and strategies which can be built upon.

Following the walkability and bikeability assessment, the participants shared the following reflections:

- **High Speeds:** The posted speed limit on Palermo Road is 35 mph and 25 mph near Palermo Middle School; however, participants commented that they perceived drivers traveling much faster than the posted speed limit. Participants also noted a lack of visible speed limit signage.

- **Lack of Controlled or Enhanced Crosswalks:** With the exception of a 4-way marked crossing at Palermo Road and Lincoln Boulevard, and standard crosswalks accompanied by fluorescent pedestrian crossing signs near Palermo Middle School, most of the crosswalks in Palermo are unmarked and unsignalized. During the walking assessment, participants noted that the marked crossings at the 4-way stop on Palermo Road and Lincoln Boulevard and near the school were faded, making it difficult for vehicles who were already travelling at elevated speeds to see. The railroad crossing markings on Palermo Road, between Railroad Avenue and Occidental Avenue, were also faded.



Training participants crossing at an unmarked crosswalk.

- **Lack of Pedestrian-Scale Lighting:** Participants noted that there was minimal pedestrian-scale lighting, making it feel unsafe to walk at night throughout Route 1 and 2. Residents mentioned that most people stay indoors after the sun sets because they do not always feel safe enough to walk in their neighborhoods.
- **Bicycle and Pedestrian Path & Wayfinding:** Cal Walks staff noted that there was no wayfinding or directional signage at the start of the bicycle/pedestrian path on Palermo Road and Lincoln Boulevard. Signage for the bicycle/pedestrian path on Palermo Road began near Palermo Middle School and stopped shortly thereafter. The bicycle/pedestrian path runs directly adjacent to the vehicle lanes, with the exception of the area near Palermo Middle School where a buffer was installed to separate the pedestrians and bicyclists using the path and the vehicles driving along Palermo Road. Participants observed trash cans and parked cars on the bicycle/pedestrian route on Palermo Road, forcing people to walk into the street in those areas. Residents mentioned that some homeowners consented to a surrendering of part of their

property to build the bicycle/pedestrian route on Palermo Road and thus, feel they have a right to use it as parking.



Vehicle parked in the pedestrian/bicycle path on Palermo Road.

- **Lack of Sidewalks:** Due to a lack of sidewalks throughout Palermo, residents walk and bike in the gutter or on paved shoulders, where they exist. Students at Palermo Middle School travel from school to Palermo Park with no pedestrian infrastructure along the way. On Palermo Road, participants observed low-hanging and often dead vegetation, which obstructed the walking path. Residents expressed fears of trees falling over into the walkway. Lastly, participants also mentioned stray, aggressive dogs as an issue that prevented people from walking and biking safely in Palermo.
- **Narrow Road Conditions:** The community residents expressed concerns with existing roads not being wide enough. In regards to lane width, Butte County Public Works explained that a lot of roads in Palermo started as farm boundary lines, which means the County would have to buy land to expand the roads, add sidewalks, and/or add bicycle lanes. Additionally, the width of some road cannot be expanded or narrowed because it would make driving agricultural equipment and trailers difficult. School buses use Baldwin Avenue in the morning and afternoon for arrival and dismissal, causing backups on Baldwin Avenue. During baseball games and other community events at Palermo Park and at the Palermo Middle School Field, residents park across from Melvina Avenue and in front of the liquor store, blocking the visibility of pedestrians trying to cross at the marked crosswalk on Melvina Avenue and Palermo Road. Ingress/egress from the school parking lot also contributes to traffic safety issues and compounds challenges for pedestrians crossing on Palermo Road. Additionally, the high school bus stop and the public transit bus stop are located at Palermo Road and Lincoln Boulevard, which causes backups for drivers and unsafe conditions for pedestrians and bicyclists.





Williams Avenue is a narrow road often used by pedestrians to walk to Palermo Park on Williams Avenue, between Melvina Avenue and Irwin Avenue.

- **Community Engagement & Education:** Participants are concerned that some residents will be resistant to infrastructure improvements in Palermo because of a perceived threat of transients and crime. Residents were also concerned about unsafe bicyclist behavior, including riding while intoxicated. The community also highlighted the lack of community and summer programs at Palermo Park to keep students engaged while not in school.
- **Flooding:** A creek on Baldwin Avenue near Lincoln Boulevard is prone to frequent flooding in the winter, which causes vehicle rerouting and forces kids to walk on the shoulder of the road. Residents were concerned with the lack of improvements to better manage storm water drainage, irrigation runoff, and flooding along Upper Palermo Road.

## Community Resident Recommendations

Following the walkability and bikeability assessment, Cal Walks facilitated small-group action planning discussions. Workshop participants discussed two sets of questions: the first focused on prioritizing strategies for non-infrastructure projects, while the second focused on potential infrastructure improvements.

Workshop participants provided the following recommendations for overall pedestrian and bicyclist safety improvements:



Participants engaged in small group action planning discussions.

Workshop participants provided the following recommendations for overall pedestrian and bicyclist safety improvements:

### ***Infrastructure Priorities & Recommendations***

- **Improve Sidewalk Conditions & Address Sidewalk Gaps:** There was general consensus among participants on the need to ensure that sidewalks and road shoulders are level and free from obstructions like vegetation, trash cans, and vehicles. To increase visibility and safety, better pedestrian-scale lighting is needed throughout all Palermo roads. Participants also requested additional sidewalks in areas where there is higher pedestrian traffic, such as the roads leading up to Palermo Park and the baseball field adjacent to Palermo Middle School.
- **Crossing Enhancements:** Participants identified the need for high-visibility crosswalks and the addition of rectangular rapid flashing beacons (RRFB), especially near Palermo Middle School where there is a higher number of people walking. To improve crossing conditions, participants also requested the restriping of faded crosswalk markings near the commercial area on Palermo Road and Lincoln Boulevard and installing high-visibility crosswalks at the four corners near Palermo Park.
- **Improved Signage:** Participants were interested in installing additional speed limit and bicycle/pedestrian path signage along Palermo Road. They were also interested in installing wayfinding signage directing path users to the Palermo Park and other commercial areas in the community.
- **Public Space:** Participants would like to implement infrastructure that would promote public gathering spaces, such as benches, mini-park areas, outside seating near businesses, plazas, courtyards, and temporary/pop-up installations. They were also interested in repurposing empty lots where negative activity and dumping occurs into community gardens, farmers market, and other art programs for the community.

- **Traffic Calming Measures:** Participants expressed a desire for speed bumps, possibly a raised crosswalk, in front of Palermo Middle School on Palermo Road to reduce vehicle speeds. They were also interested in installing a fixed or mobile speed feedback sign on Lincoln Boulevard to deter high speeds near transit stops and mark the section of Lincoln Boulevard near Baldwin Avenue as a school zone.
- **Drainage:** Residents would like to see better flooding drainage throughout the town. Lack of drainage facilities at intersection causes flooding of roads and businesses, leaving students to walk in the road during the rainy season. Along Baldwin Avenue, near Palermo Middle School, an old drainage ditch had been covered and turned into a sidewalk and a pick up/drop off area for buses. This improvement was not seen anywhere else in Palermo; however, it could serve as an example of how to re-plan drainage ditches throughout the town.

### *Non-Infrastructure Priorities & Recommendations*

Participants also identified the following enforcement, education, and encouragement programs that could be implemented to improve pedestrian and bicycle safety in Palermo:

- **Community Engagement:** Residents would like to start walking clubs to promote healthier living and community involvement in active transportation advocacy. Residents would like to see educational campaigns targeted towards vehicular, bicyclist, and pedestrian safety behavior. Participants identified a need for family and children’s programs at Palermo Park to encourage walking and biking. Participants were interested in implementing walking school buses, bike rodeos, and other youth-led projects. Finally, residents highlighted the need for greater parent involvement through the use of targeted outreach at back-to-school nights and newsletters.

### **California Walks/SafeTREC Recommendations**

California Walks and SafeTREC also submit the following recommendations for consideration by the Butte County Public Health Department and its partners:

- **High Speeds & Wide Roads:** Traffic calming measures, including the addition of separated curb extensions, speed feedback signs, and addressing missing shoulders and sidewalks, may improve the conditions along Palermo’s roadways. California Walks and UC Berkeley SafeTREC support the measures spelled out in the community recommendations sections. We also recommend that a speed study be conducted along Palermo Road, and Lincoln Boulevard near the middle school to collect accurate speed data that can be used to support improvements.
- **Collaborate with Agency and Community Partners to Establish and Fund a Safe Routes to School Coordinator Position for Butte County:** Butte County Departments of Public Works and Public Health have made great strides in improving the safety of youth traveling to and from school through both infrastructure and non-infrastructure improvements. A number of schools across unincorporated Butte County would benefit from a paid Safe Routes to School Coordinator. During the workshop, Cal Walks staff learned that many schools in the County are in rural areas where students would most likely be driven or bussed. While those schools can also benefit from Safe Routes to Schools (SRTS) programs, the Safe Routes to School Coordinator would focus primarily on those schools across the County where the student population lives close enough to walk or bike, such as in Palermo and South Oroville.

Because the Butte County Public Health Department has taken the lead in coordinating SRTS

programming and projects—including inviting Cal Walks and SafeTREC to facilitate this CPBST workshop—it makes sense that they might consider taking on the role of home agency to establish and sustain a paid SRTS Coordinator position. SRTS Coordinator positions are funded in various ways, including local general funding, state and regional Active Transportation Program (ATP) funding, and through various public-health related grants. The roles and responsibilities of a SRTS Coordinator—either part-time or full-time—vary by locality, and according to the recently released “Building Momentum for Safe Routes to School” toolkit co-authored by Safe Routes to School National Partnership,<sup>5</sup> a SRTS Coordinator may:

- Recruit and train volunteers to implement education and encouragement activities at individual schools;
  - Coordinate district or county-wide activities such as special Walk and Bike to School Day events;
  - Identify and prioritize safety concerns through walk assessments and community outreach;
  - Work with engineers and planners on changes to the physical infrastructure around schools;
  - Identify funding opportunities to expand SRTS programming; and
  - Lead or implement a local SRTS task force.
- **Apply for and leverage active transportation funding, including ATP Cycle 4 in 2018 and CMAQ Funding:** The Butte County Department of Public Works implemented the first phase of Safe Routes to School infrastructure improvements in South Oroville with funding from ATP Cycle 2. Currently, the Butte County Departments of Public Works and Public Health have applied for ATP Cycle 3 Augmentation to leverage Congestion Mitigation and Air Quality (CMAQ) funding for the same area in order to begin the next phase of the multi-phase infrastructure improvements and non-infrastructure SRTS elements around the four-school cluster in South Oroville along Monte Vista Avenue, Autrey Lane, and Via Canella, from Lincoln Boulevard to Lower Wyandotte Avenue.

With each application, the County builds upon its strengths and successes, and grows its inventory of SRTS projects and programming. This, in turn, has begun to establish a strong foundation for our first recommendation: to create and sustain a paid SRTS Coordinator position in the County. By leveraging different funding sources, the County is better positioned to implement a multi-phased project like the one in South Oroville, and this success can serve as a best practice for longer-term project visioning and planning, funding, and implementation in communities like Palermo.

- **Collaborate with Butte County Department of Public Works to host pop-up and community engagement/encouragement events:** Staff recognized that participants showed interest in hosting and/or participating in “pop-up” infrastructure projects (also referred to as temporary or “tactical urbanism”). Pop-up demonstrations are a great way for the community agency representatives to imagine what a roadway can look like with pedestrian and bicycle improvements. Residents could partner with the Butte County Department of Public Works to create temporary art between bars of high visibility crosswalks and integrate the stop, look and wave campaign near school zones.

---

<sup>5</sup> “Building Momentum for Safe Routes to School: A Toolkit for School Districts and City Leaders.” Santa Clara Public Health Department and Safe Routes to School National Partnership, 2017. Available at <http://www.saferoutespartnership.org/resources/toolkit/building-momentum-safe-routes-school>

Pop-up demonstrations can be the impetus for permanent infrastructure and can be part of a small or large community planning process. By involving the community—including students and parents—pop-up events also serve as engagement and encouragement tools. Students can incorporate their visions and artwork into temporary projects, and Public Works can ensure that the installations are safe while at the same time staff can gather much-needed feedback on what may band may not be feasible as a potential permanent installation in the future. Finally, the engagement piece will further bolster community support for proposed projects and strengthen competitive grant applications for projects in Palermo and across the County.

## Acknowledgments

We would like to thank the Butte County Public Health Department for inviting us into their community and for providing food for the Community Pedestrian and Bicycle Safety Training.

We would like to acknowledge the many community members and representatives from City of Oroville Planning Division, Palermo Unified School District, Butte County Office of Education, Butte County Public Works, Butte County Sheriff's Office, California Highway Patrol, University of California Cooperative Extension CalFresh, Palermo Community Council who participated at the workshop and for their dedication to pedestrian and bicycle safety. Their collective participation meaningfully informed and strengthened the workshop's outcomes.

Funding for this program was provided by a grant from the California Office of Traffic Safety through the National Highway Traffic Safety Administration.

# **Appendix A**

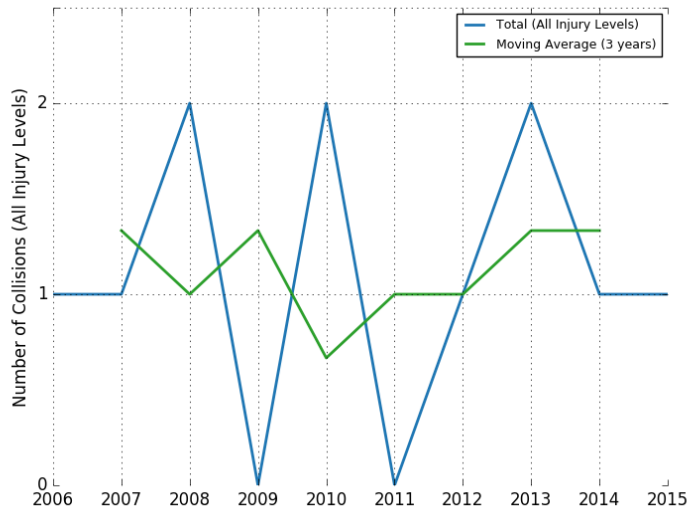
## **Pedestrian and Bicycle Collision Data Analysis**

# Community Pedestrian and Bicyclist Safety Workshop – Palermo, CA – June 22, 2017

## Pedestrian and Bicycle Collision Analyses, 2006-15\*

### PEDESTRIANS

#### Number of Collisions Involving Pedestrians, 2006-15



The **blue** line shows the number of pedestrian collisions where a fatality and/or injury occurred. There were 12 people injured or killed in 11 pedestrian collisions over the last 10 years.

The **green** line shows the three-year moving average of the number of pedestrian collisions where a fatality and/or injury occurred. The moving average is useful for tracking trend change over time, especially when the number of collisions is subject to variability. Data points are the midpoint of the three years of data specified.

The following analyses are based on the most current five years, 2011 to 2015, of data for Palermo, CA. There were 5 people killed or injured in 5 pedestrian collisions.

#### Top Violation Types for Collisions Involving Pedestrians

Type of Violation	Collisions N(%)
Pedestrian yield, upon roadway outside crosswalk	2 (40%)
Driver must yield to pedestrian right of way in a crosswalk	1 (20%)
Right half of roadway, failure to drive on	1 (20%)
Unsafe speed for prevailing conditions (use for all prima facie limits)	1 (20%)
<b>Total</b>	<b>5 (100.0%)</b>

#### Pedestrian Actions in Collisions Involving Pedestrians

Pedestrian Action	Collisions N(%)
Crossing NOT in Crosswalk	2 (40%)
In road, including shoulder	2 (40%)
Crossing in crosswalk at intersection	1 (20%)
<b>Total</b>	<b>(100.0%)</b>

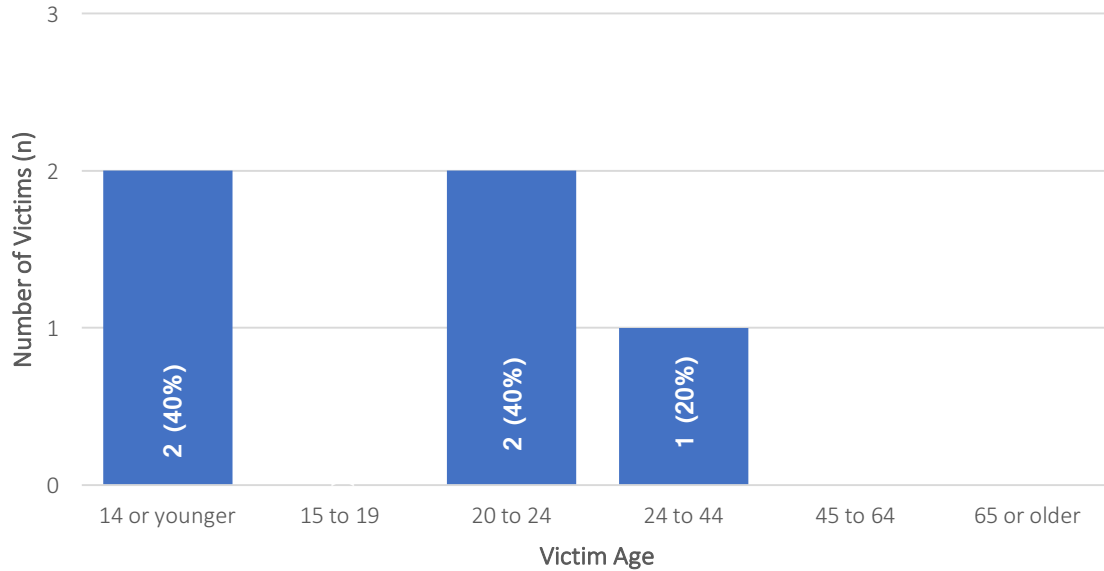
\* Data Source: California Statewide Integrated Traffic Records System (SWITRS). Collision data for 2014 and 2015 are provisional at this time.

# Community Pedestrian and Bicyclist Safety Workshop – Palermo, CA – June 22, 2017

## Pedestrian and Bicycle Collision Analyses, 2006-15\*

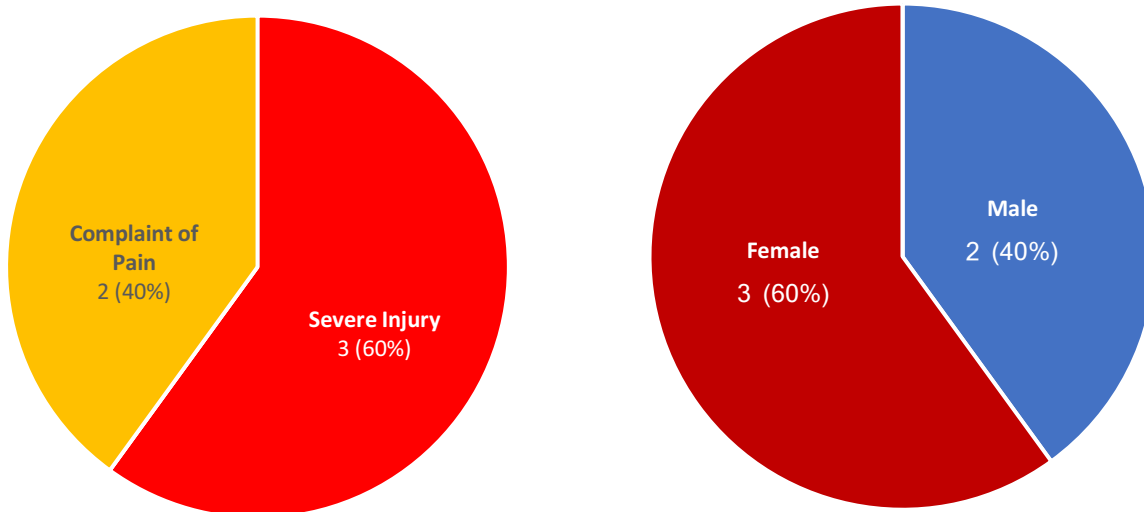
### Pedestrian Victim Demographics

The age of pedestrian victims ranged considerably across all age groups, with youth age 19 or younger accounting for 40 percent of all victims. Victims were primarily female.



### Victim Injury Severity, 2011-15

Most collisions resulted in minor injuries.



\* Data Source: California Statewide Integrated Traffic Records System (SWITRS). Collision data for 2014 and 2015 are provisional at this time.

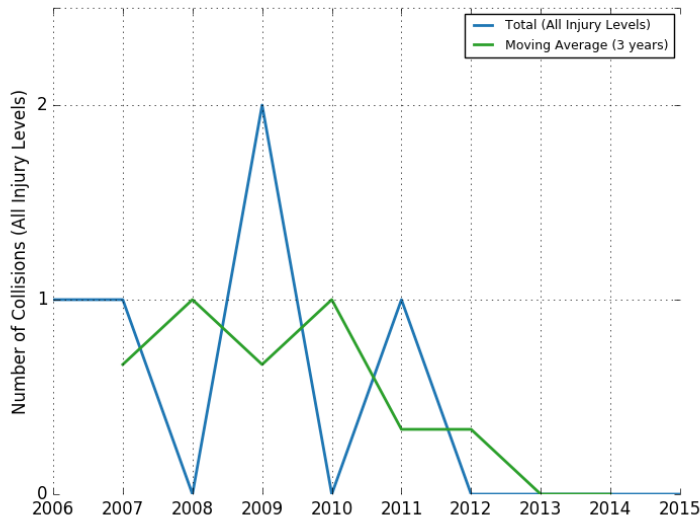


# Community Pedestrian and Bicyclist Safety Workshop – Palermo, CA – June 22, 2017

## Pedestrian and Bicycle Collision Analyses, 2006-15\*

### BICYCLISTS

#### Number of Collisions Involving Bicyclists, 2006-2015



The **blue** line shows the number of bicycle collisions where a fatality and/or injury occurred. There were 7 people killed or injured in 5 bicycle collisions over the last 10 years.

The **green** line shows the three-year moving average of the number of bicycle collisions where a fatality and/or injury occurred. The moving average is useful for tracking trend change over time, especially when the number of collisions is subject to variability.

The following analyses are based on the most current five years, 2011 to 2015, of data for Palermo, CA. There was 1 person killed or injured in 1 bicycle collision.

#### Top Violation Types for Collisions Involving Bicycles

Type of Violation	Collisions N(%)
Improper turning	1 (100%)
<b>Total</b>	<b>1 (100.0%)</b>

\* Data Source: California Statewide Integrated Traffic Records System (SWITRS). Collision data for 2014 and 2015 are provisional at this time.

# Community Pedestrian and Bicyclist Safety Workshop – Palermo, CA – June 22, 2017

## Pedestrian and Bicycle Collision Analyses, 2006-15\*

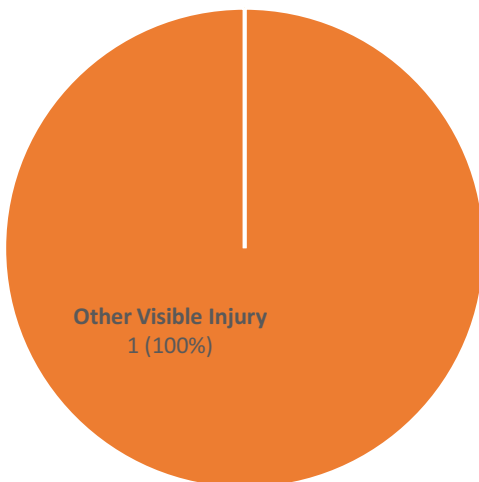
### Bicycling Victims Demographics

The age of bicycling collision victims varied across all age groups, with youth age 19 or younger accounting for 100 percent of victims. The victim was male.



### Victim Injury Severity, 2011-15

Most collisions resulted in minor injuries.



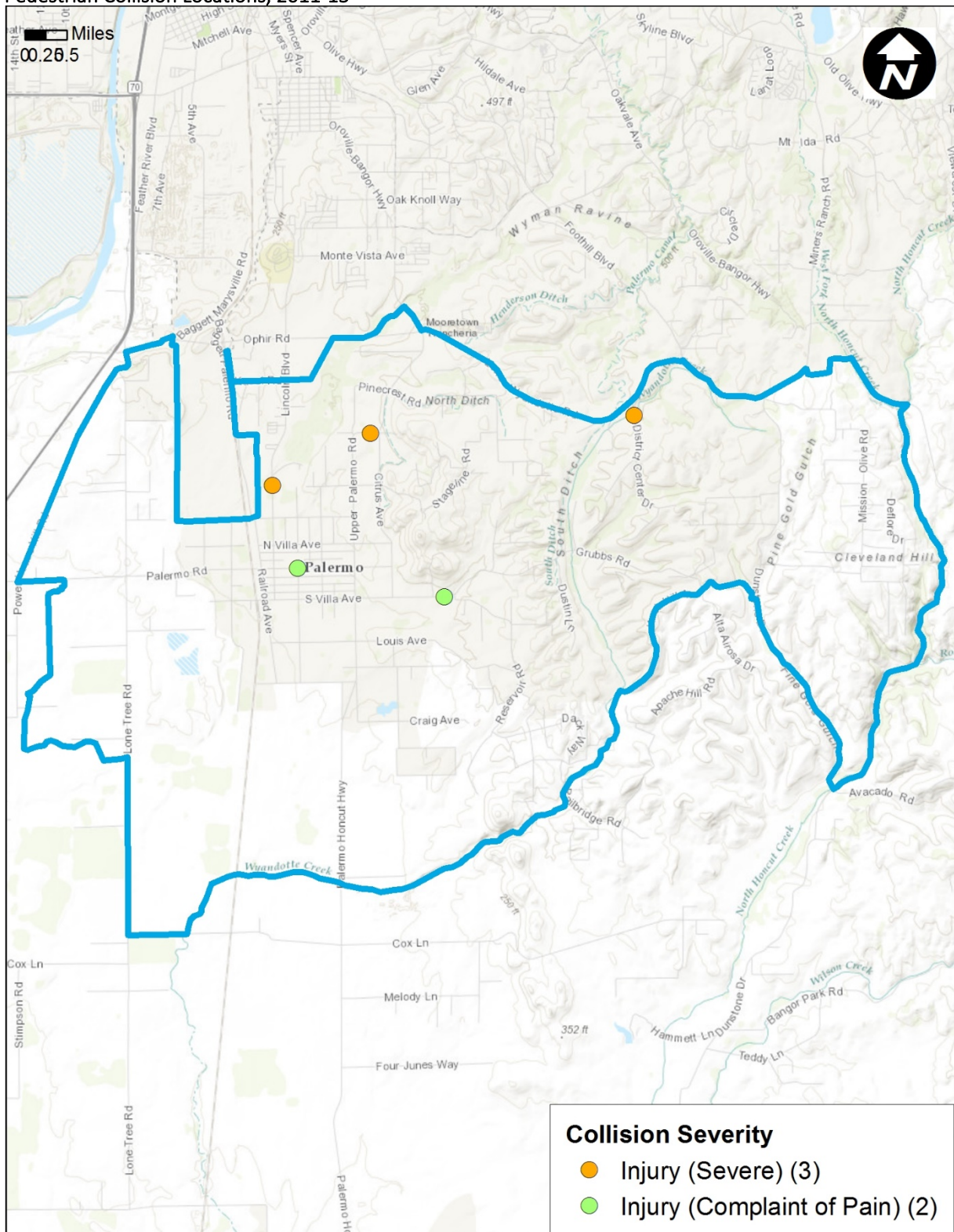
\* Data Source: California Statewide Integrated Traffic Records System (SWITRS). Collision data for 2014 and 2015 are provisional at this time.

Funding for this project was provided by a grant from the California Office of Traffic Safety through the National Highway Traffic Safety Administration.

# Community Pedestrian and Bicyclist Safety Workshop – Palermo, CA – June 22, 2017

## Pedestrian and Bicycle Collision Analyses, 2006-15\*

Pedestrian Collision Locations, 2011-15

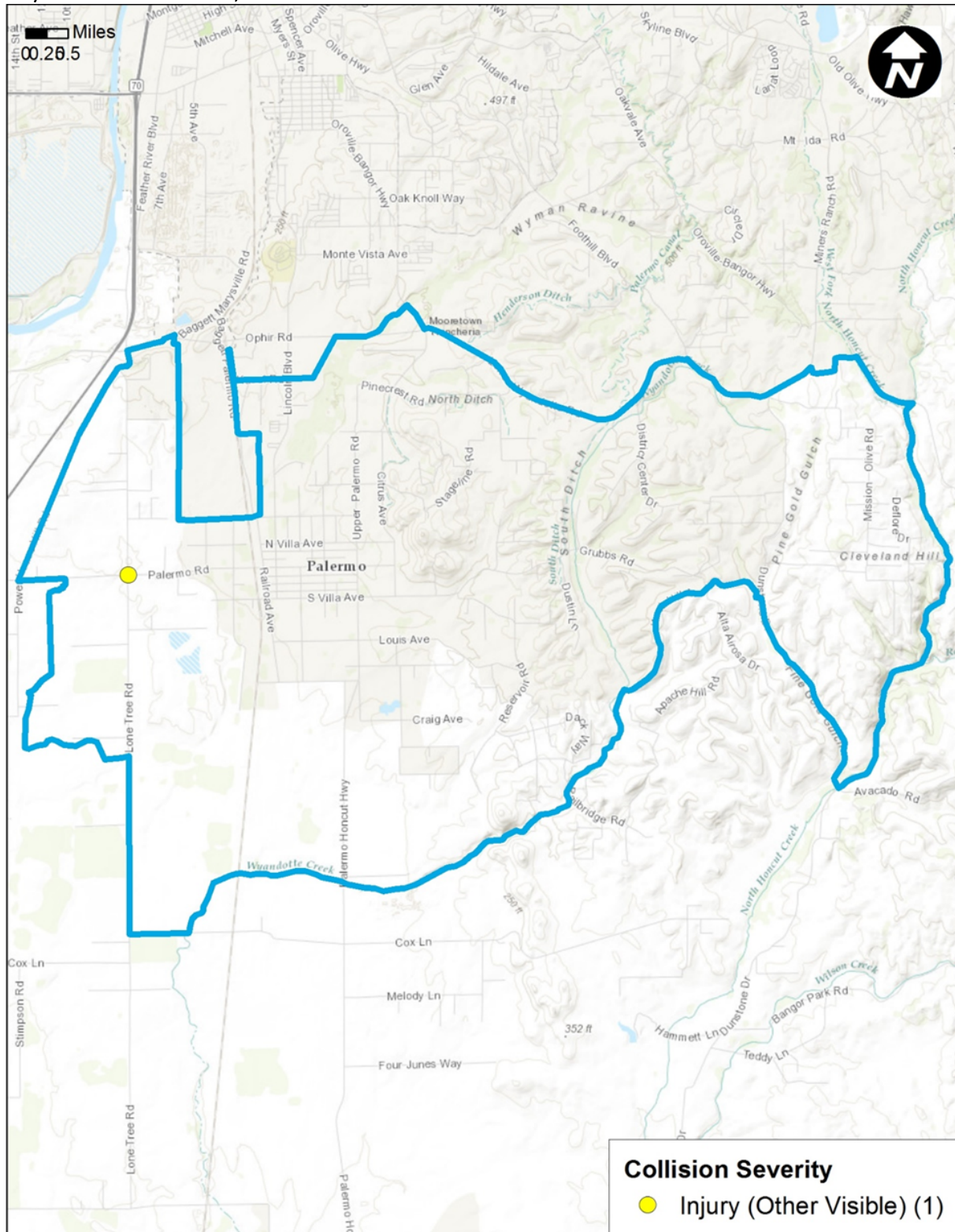


\* Data Source: California Statewide Integrated Traffic Records System (SWITRS). Collision data for 2014 and 2015 are provisional at this time.

# Community Pedestrian and Bicyclist Safety Workshop – Palermo, CA – June 22, 2017

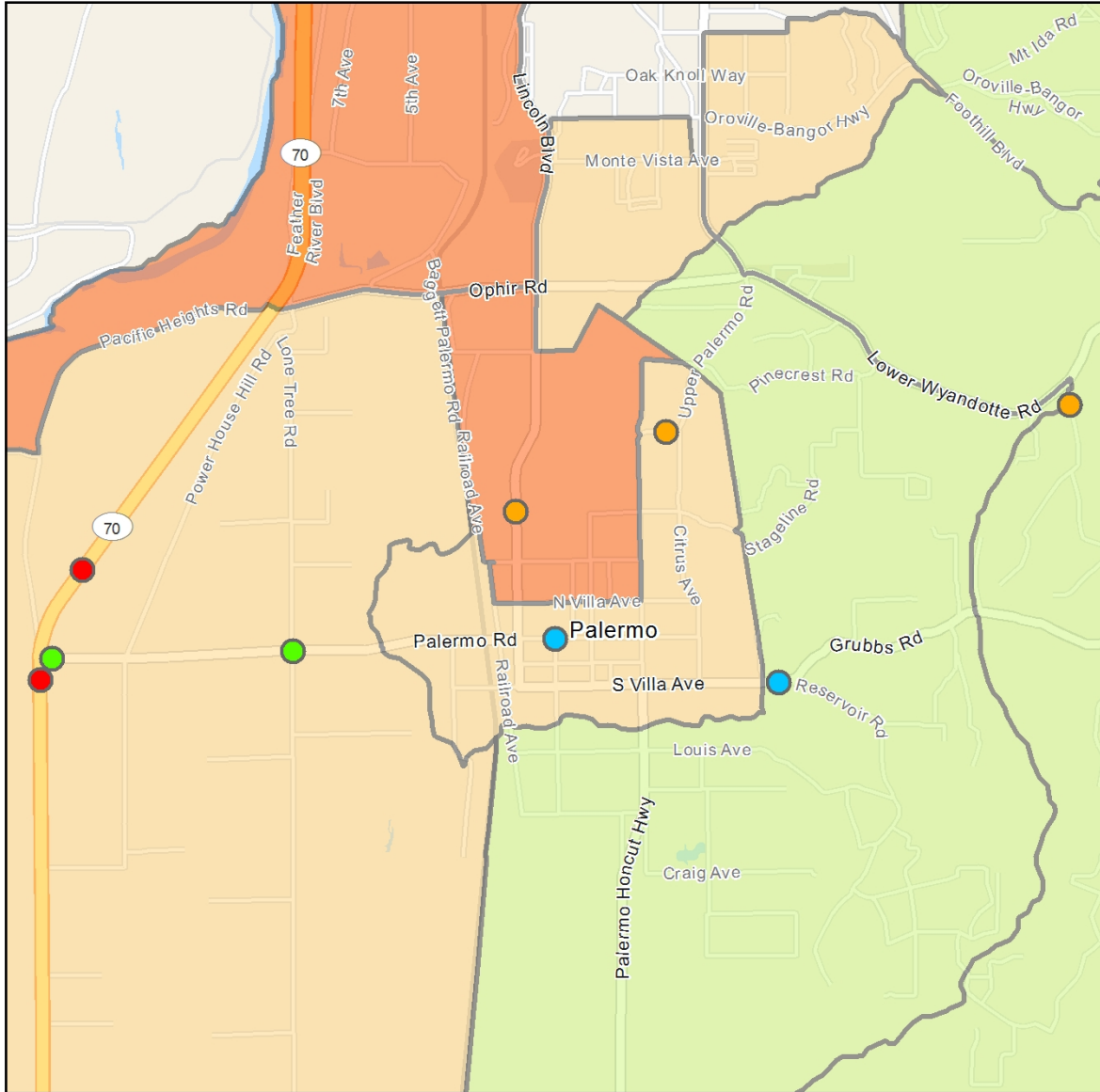
## Pedestrian and Bicycle Collision Analyses, 2006-15\*

### Bicycle Collision Locations, 2011-2015



\* Data Source: California Statewide Integrated Traffic Records System (SWITRS). Collision data for 2014 and 2015 are provisional at this time.

# Palermo Bicycle/Pedestrian Collision Map (2011 - 2015)



## Collision Severity (2011-2015)

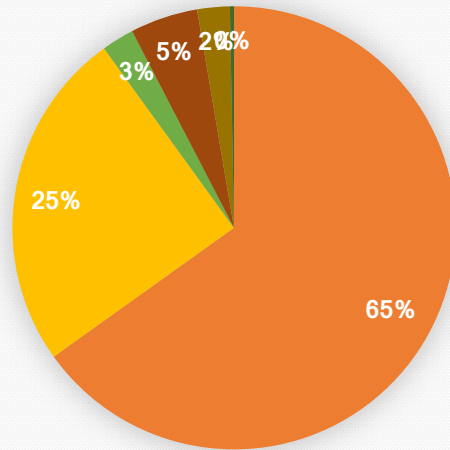
- Fatal (2)
- Injury (Severe) (3)
- Injury (Other Visible) (2)
- Injury (Complaint of Pain) (2)

## 2016 Median Household Income

- < 35K
- 35K - 50K
- 50K - 75K

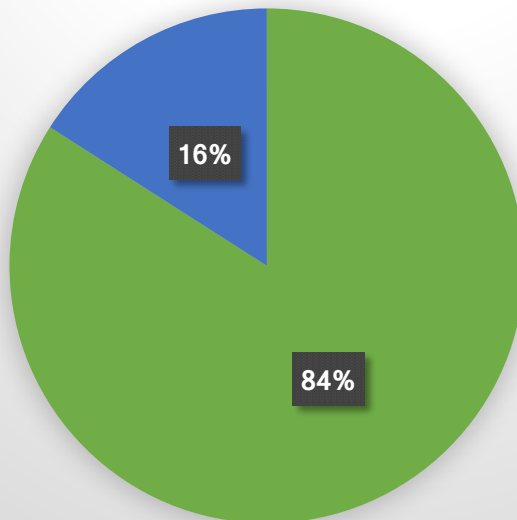
# Palermo Demographics:

## Palermo Race Demographics



White Hispanic Black 2 or more races American Indian Asian

## Language Spoken



English Spanish

## 2015 Median Income:

Race	Median Income
White	\$46,222
Black	\$31,078
American Indian	\$7,192
Asian	\$200,000
Hispanic	\$32,562
Other Race	\$69,771
Two or more Races	\$23,072

**58.9%** of grandparents aged 30-59 are the primary guardians responsible for their grandchildren in Palermo.

**26.4%** of grandparents aged 60+ are the primary guardians responsible for their grandchildren in Palermo.